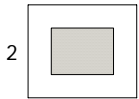


# Real Time Pricing and Energy Efficiency

Anthony Star

Assistant Manager

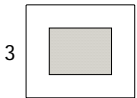
Community Energy Cooperative



## Community Energy Cooperative Demand Response Programs

- Paying for negawatts
  - Curtailment cooperatives
  - Underwriting the cost of high efficiency air conditioners and lighting (and getting rid of the old)
  - **Require direct subsidies**

- Price signals: Real-time pricing of electricity
  - **Reduces demand, raises consciousness of energy.**  
**You pay for what you get**



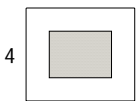
3

## **Benefits of Price Responsive Behavior**

- Increases system reliability
- Reduces the costs of electricity to all consumers by reducing the use of expensive peak power
- Lowers market risk management costs for suppliers
- Environmental benefits from

efficient use of resources

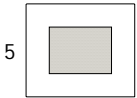
- Market power mitigation
- Incentives for technical innovation



## **The Energy-Smart Pricing Plan**

- Three year pilot program of the Community Energy Cooperative and ComEd
- Wide range of income and housing types represented among 1,500 participants
- Provides hourly electricity price
- People are saving money

- People are changing energy use patterns
- People like it!

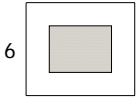


5

## **Energy-Smart Pricing Plan Components**

- Interval recording meters
- High price alerts via phone, e-mail
- Energy management/price response tools
  - Information about usage
  - Instructions and tips on how to reduce usage during peak periods
  - Ongoing energy efficiency information

- Prices available through web and phone

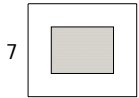


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## Key Findings

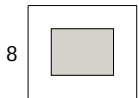
- Participants respond to prices
  - Peak demand reduced by up to 20%
  - Statistically significant relationship between price of electricity and consumption
- Participants saved money
  - Approximately 12% in 2003 and 2004

- Participants of all incomes benefited



## **One Member's Response: Changing Thermostat Set Point In Response**

**To Price Notification**



## **Beyond Demand Response**

- Energy-Smart Pricing Plan has created
  - Participant Savings
  - Peak Load Reductions
- But the Cooperative has

also found

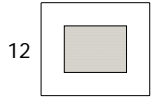
- Investments in energy efficiency
- Changing understanding and attitudes about energy usage

9  **Participants  
Invested in  
Efficiency**

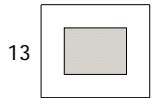
10  **Participants  
Conserved**

11  **Participants Didn't**

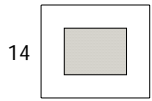
# Mind



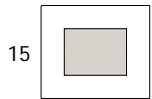
**Laundry: A  
Learned Behavior**



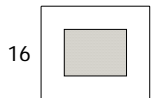
**Other Changes**



**Everyone Is Happy**



**Environment A Driver  
(But A Quarter Didn't  
Need It For Motivation)**



**Knowledge Is Power**



17  **Knowledge Leads To Action**

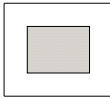
18  **Knowledge Isn't Difficult**

19  **Efficiency And Price Signals Can Work Together**

- Short-term benefits. Price signals change peak behavior
- Long-term benefits. Price signals make consumers

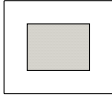
more conscious of energy  
use and more willing to  
invest in efficiency  
measures

20



## **Illinois Utilities Should Look For Ways To**

- Include and integrate both components for smaller customers
  - Optional market-based pricing option (fits into the current auction proposal)
  - Effective energy education
  - Targeted incentives for efficiency



# For More Information

Anthony Star, Assistant  
Manager

Community Energy  
Cooperative

2125 W North Ave

Chicago, IL 60647

773/269-4017

[astar@energycooperative.or](mailto:astar@energycooperative.org)

[g](mailto:astar@energycooperative.org)

[www.energycooperative.org](http://www.energycooperative.org)